INDEX TO VOLUME XXXV.

A.

Academy of Sciences, National, organized, 462.
see Proceedings.
Acetylene, *Berthelot*, 115.
Actæonidæ, *F. B. Meek*, 84.
African explorations, desiderata in, 242.
Agassiz, A., development of tentacles of Medusæ, noticed, 300.
alternate generation of Annelids, noticed, 301.
Agassiz, L., notice of Gill's Synopsis of Squali, etc., 299.
Agriculture, works on, received, 307.
Agronomie, Chimie Agricole et Physiologie, *Boussingault*, 270.
Algerie, Geographie Physique et Politique, *A. Fillias*, 269.
Alkalimetry, *S. W. Johnson*, 279.
Allen, O. D., and *S. W. Johnson*, equivalent and spectrum of cæsium, 94.
Allison, E., antimony in N. Brunswick, 150.
Aluminum, 257.
Aluminum-bronze, *Strange*, 286.
American Annual Cyclopedia, noticed, 306.
Cyclopedia, New, completed, 304.
Angström, lines in solar spectrum, 411.
Annelids, fission in, *W. C. Minor*, 35.
Appearances produced by revolving disks, *O. N. Rood*, 357.
Archæopteryx lithographica, *Wagner—von Meyer—Dana—Woodward*, 129.
Arkansas river basin, 225.
Arsenic in sulphuric acid, *Bloxam*, 116.
Asterism in mica, 259.
Asteroids, *see* Astronomy.
Astronomical Association of Chicago, 301.
observations made at U. S. Naval Observatory, *J. M. Gilliss*, noticed, 146.
observations with spectroscope, *L. M. Rutherfurd*, 71.
Astronomy:—
Asteroids, 144, 146, 460.
Brilliancy of variable star Mira Ceti, *S. Masterman*, 150.
Comet I, 1863, 461.—III, 1862, 460.
Companion to Sirius, *Rutherfurd*, 407.
Correction of elements of a comet, *J. C. Watson*, 218.
Daphne, asteroid (41), rediscovered, 144.
Double star, μ Herculis, *A. Clark*, 301.
Freya, asteroid (76), 146, 460.
Galatea, asteroid (74), 145.
LaLande prize, 301.
Nebulæ, double, 109.
Nebulæ, researches on, *A. Gautier*, 101.
variable brilliancy of, 107.
Astronomy:—
Orion, nebula of, 102.
Panopea, asteroid (70), rediscovered, 460.
Periodic meteors, *A. C. Twining*, 149.
Shooting stars of Dec. 1862, *B. V. Marsh*, 302.
of Jan. 1863, *S. Masterman*, 149.
of Nov. 1862, *A. C. Twining*, 146.
seen in England in 1862, 461.
Star shower in 1565, 461.
Stellar spectra, 407.
Taurus, second nebula in, 110.
Water-moonrise, *E. B. Hunt*, 395.
Works on, received, 307.
Zodiacal light at Key West, *Hunt*, 388.
Atmospheric nitrite of ammonia, etc., *E. Bohlig*, 423.
transparency, *E. B. Hunt*, 385.
Auroral arch, 461.
Austin, C. F., Sphagna of New Jersey, 252.
Australian heat, 49.

B.

Bache, A. D., magnetic survey of Pennsylvania, etc., 359.
Bailey, L. W., antimony in N. Brunswick, 150.
Balch, D. D., tellurbismuth from Ga., 99.
Bentham, G., and *J. D. Hooker*, Genera Plantarum, reviewed, 134.
Berthelot, acetylene, 115.
Bessemer's process, *Tunner*, 421.
Bibliography, *J. Nicklès*, 269.
Big Black river basin, 233.
Bisulphid of carbon prisms for spectral analysis, *O. N. Rood*, 356; also see 408.
Bitumens and Pyroschists, chemical and geological history of, *T. S. Hunt*, 157.
Bloxam, arsenic in sulphuric acid, 116.
Blytt, M. W., death of, 449.
Bohlig, E., atmospheric nitrite of ammonia, etc., 423.
Borates and fluoborates, analysis of, *Marignac*, 418.
Boron, compounds of, *Frankland*, 115.
Borrer, Wm., death of, 449.
Botanical necrology, 1862, 449.
collections in the Rocky Mountains, *A. Gray*, 137.
Botany:—
Caricography, *C. Dewey*, 57.
Darlingtonia Californica, *W. H. Brewer, A. Gray*, 136.
Flora Vitiensis, announced, 448.
Flore Canadienne, *L. Provancher*, 445.
Genera Plantarum, *G. Bentham* and *J. D. Hooker*, reviewed, 134.

INDEX TO VOLUME XXXV.

A.

Academy of Sciences, National, organized, 462.
see Proceedings.
Acetylene, *Berthelot*, 115.
Actæonidæ, *F. B. Meek*, 84.
African explorations, desiderata in, 242.
Agassiz, A., development of tentacles of Medusæ, noticed, 300.
alternate generation of Annelids, noticed, 301.
Agassiz, L., notice of Gill's Synopsis of Squali, etc., 299.
Agriculture, works on, received, 307.
Agronomie, Chimie Agricole et Physiologie, *Boussingault*, 270.
Algerie, Geographie Physique et Politique, *A. Fillias*, 269.
Alkalimetry, *S. W. Johnson*, 279.
Allen, O. D., and *S. W. Johnson*, equivalent and spectrum of cæsium, 94.
Allison, E., antimony in N. Brunswick, 150.
Aluminum, 257.
Aluminum-bronze, *Strange*, 286.
American Annual Cyclopedia, noticed, 306.
Cyclopedia, New, completed, 304.
Angström, lines in solar spectrum, 411.
Annelids, fission in, *W. C. Minor*, 35.
Appearances produced by revolving disks, *O. N. Rood*, 357.
Archæopteryx lithographica, *Wagner—von Meyer—Dana—Woodward*, 129.
Arkansas river basin, 225.
Arsenic in sulphuric acid, *Bloxam*, 116.
Asterism in mica, 259.
Asteroids, *see* Astronomy.
Astronomical Association of Chicago, 301.
observations made at U. S. Naval Observatory, *J. M. Gilliss*, noticed, 146.
observations with spectroscope, *L. M. Rutherfurd*, 71.
Astronomy:—
Asteroids, 144, 146, 460.
Brilliancy of variable star Mira Ceti, *S. Masterman*, 150.
Comet I, 1863, 461.—III, 1862, 460.
Companion to Sirius, *Rutherfurd*, 407.
Correction of elements of a comet, *J. C. Watson*, 218.
Daphne, asteroid (41), rediscovered, 144.
Double star, μ Herculis, *A. Clark*, 301.
Freya, asteroid (76), 146, 460.
Galatea, asteroid (74), 145.
LaLande prize, 301.
Nebulæ, double, 109.
Nebulæ, researches on, *A. Gautier*, 101.
variable brilliancy of, 107.
Astronomy:—
Orion, nebula of, 102.
Panopea, asteroid (70), rediscovered, 460.
Periodic meteors, *A. C. Twining*, 149.
Shooting stars of Dec. 1862, *B. V. Marsh*, 302.
of Jan. 1863, *S. Masterman*, 149.
of Nov. 1862, *A. C. Twining*, 146.
seen in England in 1862, 461.
Star shower in 1565, 461.
Stellar spectra, 407.
Taurus, second nebula in, 110.
Water-moonrise, *E. B. Hunt*, 395.
Works on, received, 307.
Zodiacal light at Key West, *Hunt*, 388.
Atmospheric nitrite of ammonia, etc., *E. Bohlig*, 423.
transparency, *E. B. Hunt*, 385.
Auroral arch, 461.
Austin, C. F., Sphagna of New Jersey, 252.
Australian heat, 49.

B.

Bache, A. D., magnetic survey of Pennsylvania, etc., 359.
Bailey, L. W., antimony in N. Brunswick, 150.
Balch, D. D., tellurbismuth from Ga., 99.
Bentham, G., and *J. D. Hooker*, Genera Plantarum, reviewed, 134.
Berthelot, acetylene, 115.
Bessemer's process, *Tunner*, 421.
Bibliography, *J. Nicklès*, 269.
Big Black river basin, 233.
Bisulphid of carbon prisms for spectral analysis, *O. N. Rood*, 356; also see 408.
Bitumens and Pyroschists, chemical and geological history of, *T. S. Hunt*, 157.
Bloxam, arsenic in sulphuric acid, 116.
Blytt, M. W., death of, 449.
Bohlig, E., atmospheric nitrite of ammonia, etc., 423.
Borates and fluoborates, analysis of, *Marignac*, 418.
Boron, compounds of, *Frankland*, 115.
Borrer, Wm., death of, 449.
Botanical necrology, 1862, 449.
collections in the Rocky Mountains, *A. Gray*, 137.
Botany:—
Caricography, *C. Dewey*, 57.
Darlingtonia Californica, *W. H. Brewer, A. Gray*, 136.
Flora Vitiensis, announced, 448.
Flore Canadienne, *L. Provancher*, 445.
Genera Plantarum, *G. Bentham* and *J. D. Hooker*, reviewed, 134.

BOTANY :—
Gray's Manual, new edition, 448.
New character in the fruit of Oaks, *De Candolle*, 430.
Species, considered as to variation, distribution and succession, *De Candolle*, 431.
Species Filicum, *W. J. Hooker*, 138.
Sphagna of N. Jersey, *C. F. Austin*, 252.
Synopsis Plantarum Vitiensium, 448.
Tendrils of Va. Creeper, *A. Gray*, 445.
Vegetable productions of the Fiji Islands, *B. Seemann*, 446.
Vites Boreali-Americanæ, *E. Durand*, reviewed, 445.
Böttger, contrib. to spectral analysis, 414.
formation of nitrite of ammonium by aid of heat, 114.
preparation of ozone, 111.
Boussingault, Agronomie, Chimie Agricole et Physiologie, noticed, 270.
nature of the gas evolved by leaves exposed to the light, 121.
Brachyura, classification of, *Strahl—Stimpson*, 139.
Bréguet, Manuel de Télégraphie Electrique, 269.
Brewer, Darlingtonia Californica, 136.
Brush, G. J., arsenids of copper, 296.
galena with octahedral cleavage, 128.
metallurgical abstracts, 118, 286, 420.
mineralogical abstracts, 426.

C.

Cæsium, equivalent and spectra, *S. W. Johnson* and *O. D. Allen*, 94.
California, peninsula of, explor'ns in, 236.
Canada, Flora of, *L. Provancher*, 445.
Descriptive Catalogue of Economic Minerals and Crystalline Rocks of, noticed, 134.
Report on Geology of, noticed, 134.
Canal Maratime de l'Ocean à la Mediterranie, *A. Dupeyrat*, 269.
Carboniferous and Permian, species common to, *J. W. Kirkby*, 133.
Caricography, *C. Dewey*, 57.
Carte Agronomique des Environs de Paris, *A. Delesse*, 270.
Catalogue of crystal models, *Krantz*, 297.
Catskill and Chemung groups, identification of, *A. Winchell*, 61.
Ceramic arts of London Exhibition, *Salvetat*, 268.
Chancourtois, Biguyer de, Vis Tellurique, noticed, 270.
Chemical theory of interpenetration, *C. S. Peirce*, 78.
CHEMISTRY :—
Acetylene, *Berthelot*, 115.
Action of light on sensitive plate, 286.
Alkalimetry, *S. W. Johnson*, 279.
Allotropic oxygen, *Schönbein*, 111.
Analysis of borates, etc., *Marignac*, 418.
Arsenic in sulphuric acid, *Blozam*, 116.
Behavior of magnesia salts toward carbonate of ammonia, *Divers*, 115.
Bitumens, history of, *T. S. Hunt*, 157.
Cæsium, equivalent and spectrum, *S. W. Johnson* and *O. D. Allen*, 94.
Chemistry of germination, *Schultz*, 290.
Chlorids, violet flame of, *Gladstone*, 412.
CHEMISTRY :—
Collodion of *A. Jeanrenaud*, 419.
Coloring matters from aniline, *Hofmann*, 417.
Composition of soils, *A. Muller*, 292.
Estimation of lime, *Wicke*, 116.
Formation of nitrite of ammonium by aid of heat, *Schönbein—Böttger*, 113.
Fundamental properties of oxygen and hydrogen, *Heldt*, 112.
Industrial applications of cryolite, *G. J. Brush*, 285.
Nature of gas evolved by leaves exposed to the light, *Boussingault*, 121.
New mode of detecting peroxyd of hydrogen, *Schönbein*, 114.
New series of compounds containing boron, *Frankland*, 115.
Oxyethylene bases, *Wurtz*, 114.
Preparation of ozone, *Schönbein*, 111.
Quantitative determination of starch, *Dragendorff*, 116.
Reduction of kinic to benzoic acid, etc., in animal organisms, *Lautemann*, 291.
Sulphate of lime soluble in chlorhydric acids, *S. W. Johnson*, 283.
Thallium, *Dumas—Crookes*, 273.
Theory of nitrification reclaimed by *T. S. Hunt*, 271.
and by *G. C. Shaeffer*, 409.
Urine of oxen in relation to food, *Henneburg, Stohmann, Rautenberg*, 291.
Waterglass, *J. M. Ordway*, 185.
Webster's process for oxygen, 283.
Works on chemistry, received, 307.
Clark, A., on μ Herculis, 301.
takes LaLande prize, 301.
Clark, H. J., Lucernaria the cœnotype of Acalephæ, 346.
Prodromus of the Lucernariæ, noticed, 459.
Clapp, Asahel, obituary of, 306, 450.
Classification of Mammals, *J. D. Dana*, 65.
Coal Formation of N. America, *L. Lesquereux*, 375.
Coast Survey Report, 239.
Comets, *see* Astronomy.
Connecticut-valley glacier, 249.
Conrad, T. A., Catalogue of Miocene shells of the Atlantic Slope, noticed, 428.
Contributions to Conchology, *G. W. Tryon, Jr.*, 297.
Cooke, J. P., galena with octahedral cleavage, 127.
Cope, E. D., review of Jan's Prodromo della Iconografia Generale degli Ofidi, 455.
Copper, arsenids of, *G. J. Brush*, 296.
Coral, Glass, of Japan, *W. Stimpson*, 458.
Correspondence relative to Fiji Islands, noticed, 446.
Crustacea, higher, classification of, *Strahl—Stimpson*, 139.
Crustacean, new, from Potsdam sandstone of Wisconsin, *J. Hall*, 295.
Cryolite, industrial applications of, *G. J. Brush*, 285.
Cryptonella, Centronella, Meristella, etc., *J. Hall*, 396.
Crystals, catalogue of models of, *A. Krantz*, noticed, 297.
Cyclopedia, American Annual, 306.
New American, completed, 304.

D.

Dana, J. D., Classification of Mammals, 65.
Mohawk-valley glacier, 243.
Note on Archæopteryx lithographica, 130.
Oceanic Protozoans allied to sponges, 386.
Palasterina (?) Jamesii, 295.
Review of 'Evidence as to Man's place in Nature,' 451.
Dawson, J. W., American Devonian, 309.
Flora of American Devonian, 311.
De Candolle, Alph., new character in fruit of Oaks, 430.
Species, as to variation, distribution, and succession, 431.
DeCandolle, Augustin-Pyramus, biography of, reviewed, 1.
Delesse, A., Carte Agronomique des Environs de Paris, 1862, 270.
Des Cloizeaux, A., Manuel de Mineralogie, noticed, 293.
Des Moulins, Vites Boreali-Amer., 445.
Devonian, American, *J. W. Dawson*, 309.
Flora of, *J. W. Dawson*, 311.
Dewey, C., on Caricography, 57.
Diacon and *Wolf*, spectra of metals, 414.
Diatoms on bottom of deep seas, *W. Stimpson*, 454,
Dictionary of solubilities, *F. H. Storer*, 303.
Diplothyra, the genus, *W. Stimpson*, 455.
Divers, behavior of magnesia salts toward carbonate of ammonia, 115.
Dragendorff, amount of starch in various seeds, 123.
quantitative determination of starch, 116.
Dupeyrat, A., Canal Maratime de l'Ocean à la Mediterranie, 269.
Durand, E., Vites Boreali-Americanæ, 445.

E.

Eaton, D. C., review of W. J. Hooker's Species Filicum, 138.
Echinoderm, fossil, from Cincinnati, *J. D. Dana*, 295.
Emerson, E., photographic abstracts, 286, 419.
Entretiens Populaires à l'Association Polytechnique, noticed, 269.
Evidence as to Man's place in Nature, *T. H. Huxley*, reviewed, 451.
Exploration of East Africa, desiderata in, 242.
Explorations encouraged by Smithsonian Institution, 236.

F.

Fiji Islands, vegetable productions of, *B. Seemann*, 446.
Fillias, A., Geographie Physique et Politique de l'Algerie, 269.
Fission in some Annelids, *W. C. Minor*, 35.
Fizeau, sodium spectrum, 414.
Flame, violet, of chlorids, *Gladstone*, 412.
Flora Capensis, *Harvey* and *Sonder*, 444.
of Amer. Devonian, *J. W. Dawson*, 311.
Flora Vitiensis, announced, 448.
Floral calendar, etc., *S. P. Hildreth*, 184.
Florida Reef, growth, chronology, etc., *E. B. Hunt*, 197.
Frankland, boron compounds, 115.
Fraunhofer lines in solar spectrum, *Angström*, 411.
Frobisher Bay, Hall's collections at, 293.

G.

Galena with octahedral cleavage, *Torrey—Cooke—Brush*, 126.
Gasparin, A. E. P. de, obituary of, 261.
Gangrene counteracted by oxygen, *Raynaud*, 266.
Gautier, A., recent researches relating to nebulæ, 101.
Genera Plantarum, etc., *G. Bentham* et *J. D. Hooker*, reviewed by *A. Gray*, 134.
Geographical Notices, *D. C. Gilman*, 223.
Geographie Physique et Politique de l'Algerie, *A. Fillias*, 269.
Geological Evidences of the antiquity of Man, *C. Lyell*, 465.
Reconnoissance of Indiana by D. D. Owen, *R. Owen*, 154.
Geology:—
American Devonian, *J. W. Dawson*, 309.
Archæopteryx lithographica, 129.
Bitumens and Pyroschists, history of, *T. S. Hunt*, 157.
Carboniferous and Permian, species common to, *J. W. Kirkby*, 133.
Catskill and Chemung groups, identification of, *A. Winchell*, 61.
Coal formation of N. America, *A. Winchell*, 375.
Cryptonella, Centronella, Meristella, etc., *J. Hall*, 393.
Feathered vertebrates in Jurassic, 129.
Flora of American Devonian, *J. W. Dawson*, 311.
Frobisher Bay, C. F. Hall's collections at, *R. P. Stevens* and *T. Egleston*, 293.
Geology of Vermont, price raised, 430.
Glacial scratches in Mohawk Valley, *W. B. Dwight—J. D. Dana*, 245.
Glacial origin of certain lakes, *A. C. Ramsay*, 324.
Kilauea, condition of, *T. Coan*, 296.
Mohawk-valley glacier, *J. D. Dana*, 243.
New Potsdam Crustacean, *J. Hall*, 295.
Palasterina (?) Jamesii, *J. D. Dana*, 295.
Report on Geology of Canada, 134.
Species common to Carboniferous and Permian, *J. W. Kirkby*, 133.
Works on geology, received, 308.
Germination, chemistry of, 290.
Gibbs, W., chemical abstracts, 111, 417.
New spectroscope, 110.
Note on sodium spectrum, 414.
Physical abstracts, 411.
Gill, T, notice of Tryon's Contributions to Conchology, 297.
Squali of California, noticed, 299.
Synopsis and nomenclature of the Squali, noticed, 299.
Gilman, D. C., Geographical Notices, 223.
Glacial origin of certain lakes, *A. C. Ramsay*, 324.
Glacier in Mohawk valley, *J. D. Dana*, 243.
Gladstone, violet flame of chlorids, 412.

Glass Coral of Japan, *W. Stimpson*, 458.
Globe lens for Photographic Camera, *C. Sellers*, 319.
Gray, A., Darlingtonia Californica, 137.
Hall and Harbour's botanical collections in the Rocky Mts., 137.
Manual of Botany, new edition, 448.
on the gas evolved by leaves, 122.
Review of DeCandolle on a new character in fruit of Oaks, 430.
on study of Species, 431.
Review of 'Genera Plantarum,' 134.
'Vites Boreali-Americanæ,' 445.
Tendrils of Virginia Creeper, 445.
Greene, Benj. D., obituary of, 449.
Gulf Stream Cloud Bank, *E. B. Hunt*, 389.

H.

Hall and Harbour's botanical collections in the Rocky Mts., *A. Gray*, 137.
Hall, C. F., collections at Frobisher Bay reports on, *R. P. Stevens*, *T. Egleston*, *G. N. Lawrence*, 293.
Hall, J., Cryptonella, Centronella, Meristella, etc., 396.
New Potsdam Crustacean, 295.
Harvey and *Sonder*, Flora Capensis, 444.
Hayti, Indian Race of, *J. A. Van Heuvel*, 171.
Heat, Australian, 49.
Heldt, fundamental properties of oxygen and hydrogen, 112.
Henneberg, urine of oxen, 291.
Heterogenie, ou Génération Spontanée, *C. Musset*, 270.
Hildreth, S. P., xxxvth abstract of Meteorological Journal, for 1862, 181.
Floral calendar, etc., 184.
Histoire des Arabes, *Sédillot*, 269.
Hofmann, colors from aniline, 417.
Hooker, J. D. et *G. Bentham*, 'Genera Plantarum,' reviewed, 134.
Hudson-valley glacier, 249.
Hudson Bay, explorations of, 237.
Humphreys and Abbott's Report on Mississippi River, 223.
Hunt, E. B., Florida Reef, growth, chronology, etc., 197.
Physical Notes at Key West, 388.
Hunt, T. S., Bitumens and Pyroschists, 157.
claims theory of nitrification, 271.
Hurricanes at Key West, *E. B. Hunt*, 393.
Huxley, T. H., Evidence as to Man's place in Nature, reviewed, 451.
Hydrogen, properties of, *Heldt*, 112.

I.

Ice, solution of, on inland waters, *B. F. Harrison*, 49.
Indian Race of Hayti, *J. A. Van Heuvel*, 171.
Indiana, Geological Reconnoissance, by D. D. Owen, *R. Owen*, noticed, 154.
International Exhibition, Science of, *O. C. Marsh*, 256.
Ceramic Arts of, *Salvétat*, 268.
Interpenetration, chemical theory of, *C. S. Peirce*, 78.
Inundations of the Nile, cause of, *W. Ferrell*, 62.
Iron, desulphuration of, in puddling, *R. Richter*, 119.
and steel at English Exhibition, 258.

J.

Jackson, C. T., Tellurbismuth from Georgia, 99.
Jan, G., Prodromo della Iconografia Generale degli Ofidi, reviewed, 455.
Jeanrenaud, A., formula for collodion, 419.
Johnson, S. W., alkalimetry. 297.
chemical abstracts, 115, 123, 290, 418, 423.
Nitrogen question, 426.
note on composition of soils, 292.
occurrence of silica in the higher plants, 124.
sulphate of lime soluble in chlorhydric acid, 288.
Johnson, S. W., and *O. D. Allen*, equivalent and spectrum of cæsium, 94.
Jomard, E. F., obituary of, 261.

K.

Kaskaskia river basin, 232.
Key West Physical Notes, *E. B. Hunt*, 388.
Kilauea, present condition of, *T. Coan*, 296.
Kirkby, J. W., species common to Carboniferous and Permian, 133.
Kieser, D. G. von, death of, 449.
Krantz, A., catalogue of crystal models, noticed, 297.

L.

Ladevi-Roche, Unité des Races Humaines, 270.
Lakes, glacial origin, *A. C. Ramsay*, 324.
Landolt, indices of refraction of fluid homologous compounds, 415.
Laurent, H., Theorie des Séries, 270.
Lautermann, reduction of kinic to benzoic acid, etc., in animals, 291.
Lavoisier, publication of works of, 262.
Lea, Isaac, observations on genus Unio, etc., 143.
Leavenworth, Melines C., obituary of, 306, 451.
Leçons de Chimie et de Physique Professées en 1861 à la Société Chemique de Paris, noticed, 269.
Leprosy, treatment of, *Guyon*, 266.
Leptocœlia concava, *C. Rominger*, 84.
Les Mondes, Revue Hebdomadaire des Sciences, *Abbé Moigno*, noticed, 465.
Lesquereux, Leo, coal formation of North America, 375.
report on coal of Indiana, 155.
Lime, estimation of, *Wicke*, 116.
Littrow, spectroscope, 413.
Loomis, E., on Everett's method of reducing temperature observations, 31.
Lucernaria the cœnotype of Acalephæ, *H. J. Clark*, 346.
Lucernariæ, Prodromus of, *Clark*, 459.

M.

Mackay, Jas. T., death of, 449.
Magnesia salts, behavior of, toward carbonate of ammonia, *Divers*, 115.
Magnetic Survey of Pennsylvania, etc., *A. D. Bache*, 359.

Mammals, classification of, *J. D. Dana*, 65.
Manganese, amount of, in some irons, *R. Richter*, 120.
Man's place in nature, *T. H. Huxley*, 451.
Manual of Botany of Northern States, *A. Gray*, revised edition, 448.
Manuel de Mineralogie, *Des Cloizeaux*, 393.
Maramec river basin, 232.
***Marignac*, analysis of borates, etc.,** 418.
***Marsh, B. V.*, meteors of Dec. 1862,** 302.
***Marsh, O. C.*, Catalogue of Mineral Localities in New Brunswick, etc.,** 210.
science of International Ex'n, 256.
***Masterman, S.*, brilliancy of variable star Mira Ceti,** 150.
meteors of Jan. 1863, 143.
Mathematics, works on, received, 306.
***Mayer* and *Pierson*, La Photographie considerée, etc.,** 269.
Measures, metric system of, 302.
Medicine, works on, received, 308.
***Meek, F. B.*, Actæonidæ,** 84.
Memoires de Augustin-Pyramus DeCandolle, reviewed, *A. Gray*, 1.
Metallic painting, *Oudres*, 265.
METALLURGY:—
Amount of manganese in some irons, *R. Richter*, 120.
Concentration of silver in lead, *Reich*, 119.
Crystallized silicon in pig iron, *R. Richter*, 118.
Desulphuration of iron in puddling, *R. Richter*, 119.
'Metallurgy,' *J. Percy*, noticed, 118.
Thallium in furnace products, *W. T. Roepper*, 420.
Meteorological observations made at U. S. Naval Observatory, *J. M. Gilliss*, 146.
METEOROLOGY:—
Abstract of Marietta Meteorological Journal, *S. P. Hildreth*, 181.
Atmospheric transparency, *E. B. Hunt*, 388.
Auroral arch, 461.
Gulf Stream cloud bank, *E. B. Hunt*, 389.
Hurricanes at Key West, *E. B. Hunt*, 393.
Northers at Key West, *E. B. Hunt*, 392.
Ray-bands, *E. B. Hunt*, 391.
Works on, received, 317.
Meteors, periodic, *A. C. Twining*, 149.
Metric system, 302.
***Merz*, solar spectrum,** 418.
***Meyer, H. von*, Jurassic feathered vertebrates,** 129.
***Meyn*, peat-sandstone,** 123.
Mineral and metal products of Great Britain and Ireland, 288.
localities in N. Brunswick, Nova Scotia and Newfoundland, *Marsh*, 210.
Mineralogie, Manuel de, *Des Cloizeaux*, 393.
Mineralogy, works on, received, 308.
MINERALS:—
Antimony in New Brunswick, 150.
Arsenids of copper, 296.
Columbite, analysis of, *H. Rose*, 426.
Cryolite, 285.
Galena with octahedral cleavage, 126.
Kischtimite, 427.
Kischtim-Parisit, 427.
Tellurbismuth from Georgia, 99.
Mining and Smelting Magazine, 290.
Miocene shells of Atlantic slope, *T. A. Conrad*, noticed, 428.
Mississippi basin, physical geography of, Humphreys and Abbott's report, 223.
Mississippi river and tributaries, tabular view of, 234.
Mohawk-valley glacier, *J. D. Dana*, 243.
Moonrise over water, *E. B. Hunt*, 395.
***Müller, A.*, composition of soils,** 292.
***Müsset, C.*, Hetérogenie, ou Génération Spontanée,** 270.

N.

National Academy of Sciences, organized, 462.
Almanac, etc., 1863, 465.
Nebulæ, *see* Astronomy.
***Nicklès, J.*, changes in wine,** 250.
correspondence of, 260.
Theorie Physique des Odeurs et des Saveurs, noticed, 270.
Nile inundations, causes of, *W. Ferrel*, 62.
Nitrification, 113, 263.
history of the theory of, 271, 409.
Nitrite of ammonia, atmospheric, *E. Bohlig*, 423.
formed under the influence of heat, *Schönbein*, 113.
Nitrogen question, *S. W. Johnson*, 426.
Northers at Key West, *E. B. Hunt*, 392.
Northwest Boundary Survey, 239.

O.

Oaks, new character in fruit, *Alph. DeCandolle*, reviewed, 430.
Obion river basin, 233.
OBITUARY:—
M. N. Blytt, 449.
Wm. Borrer, 449.
Asahel Clapp, 306, 450.
A. E. P. de Gasparin, 261.
Benj. D. Greene, 449.
E. F. Jomard, 261.
D. G. von Kieser, 449.
M. C. Leavenworth, 306, 451.
Jas. T. Mackay, 449.
Theodore Parkman, 155.
Jas. A. Pearce, 155.
Jas. Renwick, 306.
H. H. de Senarmont, 260.
Chas. W. Short, 451.
Joachim Steetz, 449.
John Tweedie, 449.
Odeurs et Saveurs, Theorie Physique des, *J. Nicklès*, 270.
Ohio river basin, 230.
***Ordway, J. M.*, waterglass,** 185.
Oxyethylene bases, *Wurtz*, 114.
Oxygen, allotropic form, *Schönbein*, 111.
fundamental properties, *Heldt*, 112.
new process for, *J. Webster*, 283.
used to counteract gangrene, *Raynaud*, 266.
***Owen, Richard*, Geological Reconnoissance of Indiana, by D. D. Owen, noticed,** 154.
Ozone, preparation of, *Schönbein—Böttger*, 111.
and nitrous acid, 263.

P.

Painting, metallic, *Oudres*, 264.
Palasterina (?) Jamesii, *J. D. Dana*, 295.
Paris, Carte Agronomique des Environs de, *A. Delesse*, 270.
Parkman, Theodore, obituary of, 155.
Pasteur, member of French Academy, 303.
Pearce, Jas. A., obituary of, 155.
Peat-sandstone, *Meyn*, 123.
Peirce, C. S., chemical theory of interpenetration, 78.
Pennsylvania, magnetic survey of, *A. D. Bache*, 359.
Penobscot-bay glacier, 249.
Percy, J., 'Metallurgy,' noticed, 118.
Permian and Carboniferous, species common to, *J. W. Kirkby*, 133.
Philadelphia Acad. of Nat. Sci., proceedings of, 156.
Photographie considerée comme art et comme industrie, *Mayer et Pierson*, 269.
PHOTOGRAPHY :—
Action of light on sensitive plate, *Vidal*, 286.
Formula for collodion, *Jeanrenaud*, 419.
Globe lens for camera, *C. Sellers*, 319.
Physical Geography of Mississippi basin, Humphreys and Abbott's Report, 233.
Platinum and platinum metals, 256.
Pleurodyctium problematicum, *C. Rominger*, 82.
Portland Soc. of Nat. Hist., proceedings of, 295.
Preservation of wood, *Lapparent*, 267.
Prisms of bisulphid of carbon for spectral analysis, *O. N. Rood*, 356.
Proceedings received, 308.
Boston Soc. of Nat. Hist., 156.
Philadelphia Acad. of Nat. Sci., 156.
Portland Soc. of Nat. Hist., 295.
Prodromo della Iconografia Generale degli Ofidi, *G. Jan*, reviewed, 455.
Prodromus of the History, Structure and Physiology of the Lucernariæ, *H. J. Clark*, noticed, 459.
Protozoans, oceanic, related to sponges, *J. D. Dana*, 386.
Provancher, L., Flore Canadienne, etc., noticed, 445.
Pyroschists, history of, *T. S. Hunt*, 157.
analysis of, *Whitney*, 160.

Q.

Quetelet, A., Sur la Physique du Globe, reviewed, 153.

R.

Ramsay, A. C., glacial origin of lakes, 324.
Rautenberg, urine of oxen, 291.
Ray-bands, *E. B. Hunt*, 391.
Red Disease of Cayenne, 266.
Red river basin, 224.
Refraction of fluid homologous compounds, indices of, *Landolt*, 415.
Renwick, James, obituary of, 306.
Revolving disks, appearances produced by, *O. N. Rood*, 357.
Reich, concentration of silver in lead, 119.
Richter, R., amount of manganese in some irons, 120.
Richter, R., crystallized silicon in pig-iron, 118.
Desulphuration of iron in puddling, 119.
Roepper, W. T., thallium in furnace products, 420.
Rominger, C., Pleurodyctium problematicum, 82.
Leptocœlia concava, 84.
Rood, O. N., appearances produced by revolving disks, 357.
Bisulphid of carbon prisms for spectral analysis, 356.
Rutherfurd, L. M., Astronomical observations with spectroscope, 71.
Companion to Sirius, stellar spectra, and spectroscope, 407.

S.

St. Francis river basin, 227.
Schaeffer, G. C., origin of nitrites, 409.
Scheerer, arsenids of copper, 296.
Scheurer-Kestner, A., Principes Elementaire de la Theorie Chimique des Types Appliquée aux Combinasions Organiques, noticed, 270.
Schönbein, allotropic form of oxygen, 111.
peroxyd of hydrogen, 114.
formation of nitrite of ammonia, 113.
preparation of ozone, 111.
Schultz, Max., chemistry of germination, noticed, 290.
Science of International Exhibition, *O. C. Marsh*, 256.
Sédillot, Histoire des Arabes, noticed, 269.
Seemann, B., vegetable productions of Fiji Islands, noticed, 446.
Sellers, C., Globe lens for photographic camera, 319.
Senarmont, H. H. de, obituary, 260.
Sheffield Laboratory Contributions, 94.
Shooting stars, *see* Astronomy.
Silica, occurrence of, in the higher plants, *S. W. Johnson*, 124.
Silicon, crystallized, in pig-iron, *R. Richter*, 118.
Silliman, B., Jr., note on Quetelet's Physique du Globe, 154.
book notices, 134, 146, 152, 303, 304, 306.
National Academy of Science, 462.
obituaries, 155, 306.
technical chemistry, 283.
spectroscope, 408.
Silver, concentration of, in lead, *Reich*, 119.
Sirius, companion to, *L. M. Rutherfurd*, 407.
Smithsonian Institution, explorations encouraged by, 286.
Societies, *see* Proceedings.
Sodium line D, analysis of, *L. M. Rutherfurd*, 407.
spectrum, *Fizeau—Gibbs*, 414.
Soils, composition of, *A. Müller*, 292.
Solar spectrum, *Merz*, 413.
Solubilities, Dictionary of, *F. H. Storer*, 303.
Solution of ice on inland waters, *B. F. Harrison*, 49.
Sonder and *Harvey*, Flora Capensis, noticed, 444.
Species, study of, *Alph. DeCandolle*, 431.

Spectra of alkaline metals, *Wolf* and *Diacon*, 414.
stellar, *L. M. Rutherfurd*, 407.
Spectral analysis by prisms of flint glass and bisulphid of carbon, *O. N. Rood*, 356.
contributions to, *Böttger*, 414.
Spectroscope, new form, *Littrow*, 413.
L. M. Rutherfurd, 407.
for astronomical observations, *L. M. Rutherfurd*, 71.
new form, *W. Gibbs*, 110.
Spectrum, solar, *Merz*, 413.
Fraunhofer lines in, *Angström*, 411.
Sphagna of New Jersey, *C. F. Austin*, 252.
Star-shower in 1565, 461.
Starch, amount of, in various seeds, *Dragendorff*, 123.
quantitative determination of, *Dragendorff*, 116.
Steetz, Joachim, death of, 449.
Stimpson, W., classification of Brachyura, etc., 139.
Diatoms on deep sea bottoms, 454.
genus Diplothyra, 455.
review of Conrad's Catalogue of Miocene Shells, 428.
Stohman, urine of oxen, 291.
Storer, F. H., Dictionary of Solubilities, noticed, 303.
Strahl, classification of Brachyura, 139.
Sur la Physique du Globe, *A. Quetelet*, reviewed, 152.
Survey, Coast, report, 239.
of Hudson Bay territory, 237.
of Northwest Boundary, 239.
of peninsula of California, 236.
Susquehannah-valley glacier, 249.
Synopsis Plantarum Vitiensium, noticed, 448.

T.

Télégraphie Electrique, manuel de, *Breguet*, noticed, 269.
Temperature, extreme, variation of, in temperate zone, *W. Dennis*, 44.
observations, method of reducing, *J. D. Everett*, 17.
remarks on Everett's article, *E. Loomis*, 31.
Tendrils of Virginia creeper, &c., *A. Gray*, 445.
Thallium, *Dumas—Crookes*, 273.
in furnace products, *W. T. Roepper*, 420.
Theorie Physique des Odeurs et des Saveurs, *J. Nicklès*, noticed, 270.
des Series, *Laurent*, noticed, 270.
Torrey, J., octahedral galena, 126.
Tryon, G. W., Jr., monograph of Pholadacea, &c., noticed, 297.
Tunner, Bessemer's process, 421.
Tweedie, John, death of, 449.
Twining, A. C., remarks on meteors, 149.
shooting stars of Nov. 1862, 146.

U.

Unionidæ, observations on, *I. Lea*, noticed, 143.
Unité des Races Humaines, *Ladevi-Roche*, 270.
U. S. Naval Observatory, observations made at, *J. M. Gilliss*, noticed, 146.

V.

Van Heuvel, J. A., Indian race of Hayti, 171.
Ventilation at Key West, *E. B. Hunt*, 394.
Vermont, Geology of, price raised, 430.
Vertebrates, feathered, in Jurassic, *A. Wagner—H. von Meyer*, 129.
Vis Tellurique, *Biguyer de Chancourtois*, noticed, 270.
Vites Boreali-Americanæ, *E. Durand—Ch. DesMoulins*, reviewed, 445.

W.

Wagner, A., Jurassic feathered reptiles, 129.
Waterglass, *J. M. Ordway*, 185.
Water moonrise, *E. B. Hunt*, 395.
Watson, J. C., corrections of elements of a comet, 218.
Webster, J., process for oxygen, 283.
Weights, metric system, 302.
White river basin, 225.
Wicke, estimation of lime, 116.
Winchell, A., identification of Catskill and Chemung groups, 61.
Wine, changes in, *J. Nicklès*, 250.
Wolf and *Diacon*, spectra of metals, 414.
Wood, preservation of, 267.
Woodward, H., Archæopteryx lithographica, 132.
Wurtz, oxyethylene bases, 114.

Y.

Yazoo river basin, 232.
Yellow fever, *E. B. Hunt*, 395.

Z.

Zodiacal light at Key West, *Hunt*, 388.
Zoology:—
Classification of Brachyura, *W. Stimpson*, 139.
of mammals, *J. D. Dana*, 65.
Diatoms on deep sea-bottoms, *W. Stimpson*, 454.
Evidence as to Man's place in nature, *T. H. Huxley*, reviewed, 451.
Hall's collections at Frobisher Bay, *G. N. Lawrence*, 295.
Jan's Prodromus of the Ophidia, reviewed, 455.
Lucernaria the cœnotype of Acalephæ, *H. J. Clark*, 346.
Observations on genus Unio, *I. Lea*, noticed, 143.
Oceanic Protozoans related to sponges, *J. D. Dana*, 386.
Works on, received, 308.